

Serial No. 10/047,584

REMARKS

This amendment is responsive to the official action dated July 11, 2003.

Claims 1-25 were pending in the application. Claims 14-25 were subject to restriction and withdrawn from consideration. Claims 1-13 were rejected. No claims were allowed by the Examiner.

By way of this amendment, the Applicant has submitted a proposed drawing revision for Figure 1.

Claims 5, 9, 10, 12 and 13 have been amended. Claims 14-25 have been canceled. Claims 1-4, 6-8 and 11 remain unchanged.

Accordingly, Claims 1-13 are currently pending.

I. ELECTION/RESTRICTION:

The Examiner stated that the present application includes two distinct and unrelated inventions. Group I contained in Claims 1-13 and Group II contained in Claims 14-25. Applicant hereby affirms election without traverse of the Group I invention as contained in Claims 1-13 for prosecution on the merits and has canceled Claims 14-25 directed toward the non-elected invention.

II. OBJECTION TO DRAWINGS:

A proposed revised Figure 1 has been submitted that includes the missing reference sign "56". Withdrawal of this objection and entry of the substitute Fig. 1 into the file is requested.

III. REJECTION OF CLAIMS UNDER 35 USC 112

Claims 5, 9 and 10-13 were rejected under 35 USC 112, second paragraph as being indefinite. Specifically, the Examiner identified the use of the term "fluid state" was used without proper antecedent basis. Further the Examiner identified several instances within the claims where the term "fluid" was used where it was unclear whether it refers to "first fluid" or "second fluid".

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The Applicant has amended the claims in question to provide proper antecedent basis and provide definiteness for the terms that were identified as indefinite. Withdrawal of this rejection is requested.

IV. DOUBLE PATENTING

Claims 1-6 and 12-13 were provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over Claims 1-5 and 7-8 of co-pending Application No. 10/164,792. Applicant asserts that both applications are co-owned and will file a terminal disclaimer as required should the present application be determined as patentable.

V. REJECTION OF CLAIMS UNDER 35 USC 103

Claims 1-13 were rejected under 35 USC 103(a) as being unpatentable over US Patent No. 6,004,403 (Gray et al.). The Examiner has stated that Gray teaches a method of treating an object including placing the object in a chamber, sealing the chamber, reducing the pressure within the chamber, introducing a first fluid, recovering and retaining the first fluid, introducing a second fluid, recovering the second fluid, introducing a non-condensable gas and opening the chamber to remove the object. Further, the Examiner states that although Gray does not demonstrate returning the first and second fluids to the first and second concentrations and the associated mixing steps, it would have been obvious to one skilled in the art to adjust the concentrations as required.

The Applicant admits that the 403' Gray patent does disclose a closed circuit solvent processing system. However, the cited system can only handle one fluid within the closed loop arrangement. There is no discussion or disclosure anywhere in the cited reference that provides for the claimed step of "introducing a second fluid" as in the present application. The cited reference is clearly directed to a process that includes the steps of introducing a first solvent to the evacuated chamber, cleaning the object while maintaining an airless environment within the chamber, recovering the solvent from the object, and removing the object from the chamber. Further the disclosure states that the process is capable of a single step process for cleaning the object only.

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Clearly a review of Gray demonstrates that the disclosure actually teaches a closed circuit solvent cleaning method that utilizes only one solvent. The main goal of the method is to prevent the mixing of solvents with other volatile solvents or air. As can be seen at Column 3, Lines 10-14 and Column 6, Lines 38-43, the disclosure lists the advantages of not mixing any volatile contaminant solvents with the cleaning solvent. Clearly adding a second fluid would interfere with this important stated objective of the cited reference. For this reason, the cited reference does not include the additional step of "introducing a second fluid" as suggested by the Examiner. In fact, the Gray reference specifically teaches away from the use of an additional step whereby a second fluid is added to the chamber as this step would contaminate the chamber and defeat the stated purpose of the entire process.

Further, the cited Gray reference does not mention using more than one set concentration for the first fluid solvent. This is because Gray is not carrying out a multi-step process as disclosed in the present invention but a single cleaning step process with a single solvent. A person skilled in the art would not be motivated to use more than one solvent concentration, solvent mixture or more than one solvent because only a single step process is disclosed. Unless a multi-step process is perceived first, there would never arise the need to utilize multiple solvent concentrations.

In contrast, the present application at page 3, paragraph 5, specifically states that, "The main objective of this invention is to maintain two or more solutions used for processing an object in two or more steps at a relatively constant concentration state from batch to batch". In the first example provided at page 6, paragraph 10 the present application discloses the use of a first step water wash followed by a second step alcohol rinse.

Clearly a fundamental understanding of the use of solvents in a multi-step process provides insight that differentiates the present application from the single step process disclosed in the cited reference. For example isopropyl alcohol (IPA) is used in

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the first example mixture as a rinse for water. IPA is also used in the second example with perchloroethylene (PCE) to illustrate that IPA can be used as a wash for hydrophilic material which can not be removed by PCE. Testing has shown that the effectiveness of IPA as a hydrophilic cleaner is reduced as the PCE concentration increases. It is therefore desirable to keep the higher concentration of IPA from being as diluted as little as possible with PCE and indeed to concentrate the IPA as outlined in the patent. None of these objectives could be met by using the single step process disclosed in the cited reference.

The Applicant asserts that the disclosure of the present invention includes clearly identified claim limitations that are not disclosed in the cited reference. Further the Applicant asserts that it would not have been obvious to one skilled in the art to simply view the one-step process in the cited reference and convert it to the multi-step process of the present application, this can only be arrived at through hindsight reconstruction. Finally, the Applicant asserts that one skilled in the art would not have the motivation to utilize various solvents at various concentrations in a multi-step succession because the cited reference only includes a single step process. For these reasons, the cited reference cannot render the present application obvious and this rejection cannot be maintained.

Reconsideration of claims 1-13 is respectfully solicited.

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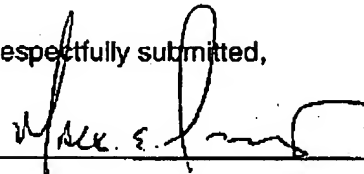
VI. CONCLUSION

Accordingly, claims 1-13 are believed to be in condition for allowance and the application ready for issue.

Corresponding action is respectfully solicited.

PTO is authorized to charge any additional fees incurred as a result of the filing hereof or credit any overpayment to our account #02-0900.

Respectfully submitted,



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